CASE REPORT

Neonatal intestinal obstruction secondary to a small bowel duplication cyst

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SUMMARY

A 3-week-old neonate developed abdominal distension and vomiting which subsided after conservative management. However, there was a recurrence of symptoms for which a lower gastrointestinal tract contrast study was performed. The infant had a filling defect in the area of the transverse colon. A CT scan was performed, showing a duplication cyst arising from the small bowel and indenting the transverse colon. Resection of the duplication cyst and end-to-end anastomosis of the bowel was performed. The duplication cyst was of tubular type, and a sealed perforation was noted in the cyst wall.

BACKGROUND

The usual causes of abdominal problems in the newborn are meconium plug, Hirschprung's disease, volvulus and malrotation. A duplication cyst is an uncommon problem encountered in the neonatal period.

CASE PRESENTATION

A well thriving 3 week old neonate was hospitalised for abdominal distension, irritability and non-bilious vomiting of 4 days duration. Clinical examination and preliminary investigations (septic workup, electrolytes, abdominal X-ray and ultrasound) were insignificant. After 48 h of conservative management, the infant improved and feeding was restarted.

However, the symptoms recurred and the infant was evaluated with lower gastrointestinal tract study. The contrast study showed a filling defect of the transverse colon, following which a CT scan was performed. The CT scan revealed a duplication cyst of the small bowel indenting the transverse colon (figure 1). Laparotomy was performed and the duplication cyst was resected; end-to-end anastomosis was performed (figures 2–4). The cyst was located in the ileum and was of tubular type. A sealed perforation was noted in the wall of the cyst (figure 3). Histopathological examination of cyst wall demonstrated all three layers of intestine. The infant was restarted on oral feeding after 48 h and was discharged healthy.

DIFFERENTIAL DIAGNOSIS

- ▶ Hirschprung's disease
- ▶ Intestinal atresia
- ▶ Malrotation
- ▶ Ladd's bands
- ▶ Volvulus

Figure 1 CT scan showing duplication cyst (outline marked) in small bowel.

TREATMENT

- ▶ Intravenous fluids
- ▶ Antibiotics
- ▶ Resection and end-to-end anastomosis

OUTCOME AND FOLLOW-UP

The infant recovered completely and was discharged home healthy.

DISCUSSION

The infant in our case report was 3 weeks old and presented with features of subacute intestinal obstruction. A contrast study led to the diagnosis; CT confirmed the small bowel duplication cyst. Laparotomy revealed a sealed perforation of the

Figure 2 Resected duplication cyst walls exposed with short segment of ileum.

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Figure 3 A small healed perforation noted in the wall of the duplication cyst.

duplication cyst. The likely reason for the infant's irritability may be perforation of the duplication cyst. However, the clinical signs were non-corroborative (mild peritonism) as the contents of the cyst were sterile secretions and the perforation was small.

Figure 4 The duplication cyst shown is tubular type.

A duplication cyst, though rare in infancy has, however, been reported in the early neonatal period.^{1 2} The common features are bilious vomiting, abdominal distension and mass per abdomen, and, rarely, respiratory distress.¹⁻⁵ We could not explain why the infant had non-bilious vomiting; there were no features of intestinal obstruction on initial X-rays. It is likely that the cyst was obstructing the transverse colon and hence the features of lower intestinal obstruction preponderated.² Resection of the bowel segment along with the cyst was performed as it was communicating.

Learning points

- ▶ Duplication cyst should be considered as a differential diagnosis in infants with bowel obstruction.
- ▶ Perforation of duplication cyst, if it occurs, may not present with a classical picture of peritonitis.
- ▶ CT scan may aid in the diagnosis of an infant with filling defects on contrast study.

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